Global Forest, Paper & Packaging
Industry Survey
2010 Edition – Survey of 2009 Results
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Welcome to the PricewaterhouseCoopers Global Forest, Paper & Packaging† Industry Survey — 2010 Edition. The goal of the Survey, now in its 13th year, is to provide insight into the major companies and an overview of the issues and events shaping the industry. This year’s Survey summarises the 2009 publicly available year-over-year financial information of the PwC Top 100, the 100 largest forest, paper and packaging (FPP) companies in the world, ranked by sales revenue.

This year’s Survey results reflect the continued challenges faced by the sector. The PwC Top 100 companies’ revenues declined significantly from the prior year due to a collapse in demand and weak prices in the first half of the year, with some recovery late in 2009. Net income recovered but was significantly impacted by the one-off effects of the US Alternative Fuel Mixture (“Black Liquor”) Credit. Despite a turbulent year, membership of the PwC Top 100 remained relatively stable. Canadian companies suffered more than the average. Notably the trend in previous years towards increased representation from the emerging markets largely stalled; however with the emerging markets moving at a pace which we in the “mature” economies can only envy, we expect this trend to resume.

Our 23rd Annual Global Forest & Paper Industry Conference held in May 2010 in Vancouver, Canada stimulated extensive discussion around the theme of “Transformation through innovation”. The conference drew more than 400 CEOs, senior executives, customers, suppliers, financial analysts, government representatives and other stakeholders, engaging them in dialogue about the state of the industry, the case for change, sustainability and how some producers have transformed their operations and enhanced profitability. We include a summary in this report, starting on page 29 and more details are also available on our website: www.pwc.com/forestconf10. The 24th Annual Conference will be held on 11 May, 2011 in Vancouver, Canada as part of the Global Forest Leadership Summit. The Summit comprises a series of international conferences and events over several days that will explore themes and issues for the future of the world’s forests and forest products industries.

PricewaterhouseCoopers’ thought leadership and depth of industry knowledge have enabled us to satisfy our clients’ business needs and surpass their expectations by offering proactive solutions to help them identify and capitalise on trends. For more information about the services offered by PricewaterhouseCoopers’ Global Forest, Paper & Packaging Industry Practice, please contact one of the professionals in your region listed inside the back cover of this Survey. We hope you enjoy the 2010 edition of the PricewaterhouseCoopers Global Forest, Paper & Packaging Industry Survey.

Clive Suckling
Global Leader, Forest, Paper & Packaging Industry
PricewaterhouseCoopers

Craig Campbell
Partner, Consulting, Forest, Paper & Packaging Industry
PricewaterhouseCoopers

Table 1: PwC Top 100 Companies
(US $ billions)

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<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Revenue</td>
<td>317.8</td>
<td>358.3</td>
<td>333.3</td>
<td>317.3</td>
<td>335.9</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>15.9</td>
<td>21.2</td>
<td>26.1</td>
<td>23.5</td>
<td>21.7</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>4.0</td>
<td>(6.5)</td>
<td>13.8</td>
<td>11.9</td>
<td>9.2</td>
</tr>
<tr>
<td>Return on equity (%)</td>
<td>2.9%</td>
<td>1.8%</td>
<td>8.0%</td>
<td>6.5%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Return on capital employed (%)</td>
<td>2.7%</td>
<td>2.3%</td>
<td>4.9%</td>
<td>4.6%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>18.4</td>
<td>23.8</td>
<td>24.5</td>
<td>21.9</td>
<td>20.6</td>
</tr>
<tr>
<td>Depreciation</td>
<td>20.8</td>
<td>20.6</td>
<td>19.9</td>
<td>20.6</td>
<td>21.4</td>
</tr>
<tr>
<td>Cash flow from operations (%)</td>
<td>35.2</td>
<td>26.0</td>
<td>30.8</td>
<td>34.8</td>
<td>29.9</td>
</tr>
</tbody>
</table>

1. Throughout the Survey all currency references are in US dollars unless otherwise noted.
2. Refer to the Methodology section on page 26 for the definition of return on capital employed.
3. Starting in 2007 cash flow is reported before working capital. Prior to 2007 cash flows are reported after working capital.
† Inclusive of paper packaging only
The global economic environment continued to influence the performance of the PwC Top 100. The first half of 2009 presented a challenging market situation, as the effects of the global economic downturn carried over into the first two quarters of the year. Economic and export activity continued to decline, and tight credit markets, limited access to capital, deterioration in levels of new housing starts, construction and consumer spending activity posed further challenges.

According to the IMF, World GDP growth contracted from 3.0% positive in 2008, to 0.6% negative in 2009. Governments responded, and government support in the form of fiscal stimulus spending rose sharply. By the second half of the year conditions started to improve as emerging Asia — China and India in particular — began to see an upturn in economic activity. Change in GDP growth varied by region. The decline in growth in China, for example, was smaller than expected, aided largely by government stimulus spending.

Many global forest, paper and packaging companies described operating conditions in 2009 as challenging. Severe declines in demand as well as pricing for forest, paper and packaging products were seen in the first half of the year, and permanent and indefinite capacity closures ensued. As a consequence, significant write-down and asset impairment charges continued to hit company results. Companies actively cut costs, however their efforts were complicated in some cases by mills operating at reduced capacity and at lower efficiency rates as industry players looked to restore the supply balance to a saturated market and to preserve cash. In general, for manufacturers in developed markets plagued by overcapacity and dwindling market share, the downturn further compromised the industry supply chain as smaller players, downstream producers, distributors and skilled labour continued to exit the industry.

The impact of the global recession on forest, paper and packaging industry sectors disrupted activity everywhere, with varying degrees of severity depending on the industry sector and region. Building materials, including sawn lumber and panels, faced further price erosion, a difficult situation for a sector which in North America has been struggling since 2006 from the decline in residential building activity. Prices rebounded sharply in the final quarter of 2009 and into 2010 driven by supply shortages and weather-related curtailments. Market fundamentals remained weak, though, with a continued bleak housing market.

Fuelled by economic growth in China, the pulp sector experienced a resurgence in the second half of 2009 as buyers from China rebuilt inventories at prices below domestic production costs. Demand from China helped stabilise an oversupplied pulp market and encouraged the restart of previously idled capacity in North America and Europe. Pulp prices returned to pre-recession levels and continued to increase into the new year. Pulp operations in the US which qualified for the Alternative Fuel Mixture ("Black Liquor") Credit were able to continue production through periods of weak demand and pricing, as the cash payments reduced manufacturing costs to levels comparable to global low cost producers.
Consumption of paper differed across regions. Demand for printing and writing paper, already facing a structural decline due to reductions in advertising spending and continued migration to digital media, was further impacted by the global recession. Prices for newsprint, for example, fell to historic lows in North America and demand dropped by up to 15% and 25% in Europe and North America respectively. Paper consumption in emerging markets continues to expand, particularly in industrial grades, however, levels of consumption remain much lower as compared to developed markets.

Other sectors were not immune. Reductions in exports, consumer spending and industrial activity caused an overall decline in demand in the packaging sector. Even the tissue sector, a consumer staple which is less prone to fluctuations in demand during recessionary periods, experienced the effects of substitutions of lower quality and priced grades of product by consumers. Tissue continues to be a growth sector for the industry and producers such as Domtar have undertaken projects to convert paper pulp capacity to fluff pulp.

By the second half of the year, inventory surpluses abated, and markets began to improve, but demand for forest, paper and packaging products remained well below pre-crisis levels. Some companies emerged with leaner and more flexible mills, able to react more quickly to changing market conditions. Others struggled and continue to fight for survival.

Figure 1: Global NBSK Pulp Prices (US $ per tonne)

Source: RISI PPI Pulp & Paper Week
Fibre Supply

During the first half of 2009, companies with timber holdings deferred harvest levels in response to weak log market prices and reduced demand for product. Recovered fibre markets were oversupplied as purchases slowed from China, a dominant and influential buyer in the market for waste paper. By the second half of the year, the pulp markets rebounded; China resumed buying activity and pulp prices soared reaching market highs during the first half of 2010, exacerbated by the temporary loss of Chilean pulp supplies due to the earthquake there in February; prices for waste paper and residuals followed in tow.

Despite these ups and downs in demand for virgin and secondary fibre, the broad trend is that forests are becoming an increasingly valuable economic resource. Global forest, paper and packaging companies continue to face uncertainties around future fibre availability and access to sustainable and reasonably priced fibre. Some are looking to achieve a goal of higher self sufficiency in low cost fibre by responding strategically and geographically diversifying their investments in fibre rich regions such as South America.

Fibre is the single largest cost component for most forest and paper companies. Competition for fibre is growing from new and existing sources. New entrants to the industry, planned biomass energy projects and energy partnerships all want a share of the available biomass feedstock. Although capacity is expanding — major pulp and paper mill projects in emerging markets (delayed during the economic downturn due to exodus of capital) are resuming — competition and prices for virgin and recovered fibre and residuals can be expected. The industry is responding; economically viable options for increasing wood fibre flows are being explored, although these will inevitably take time to yield benefits. In the meantime sources of recovered fibre are coming under increasing pressure, as the demand for recycled fibre products increases faster than demand overall.
Power

Energy consumption decreased during the global economic slowdown, however global demand for energy is expected to increase due to continued industrialisation and increased wealth in emerging markets. Spot crude oil prices trended upward in 2009, trading between $35 and $85 a barrel, but still down considerably from the peak of $145 a barrel in July 2008. The average price of oil in 2009 at $62 a barrel was 36% lower than the average of $97 a barrel in 2008. In 2010 this figure looks likely to increase — average monthly crude oil prices for the first half of 2010 fluctuated between $73 and $85 a barrel.

Forest products manufacturing (pulp and paper production in particular) is among the most energy-intensive industries. Despite overall cuts in capital expenditure, many companies are continuing to invest to both reduce energy consumption and to increase the share of energy from renewable sources such as forest biomass. Renewable energy may in the short term be more expensive than power derived from fossil fuels, however companies are also satisfying key operational and environmental objectives, including energy independence, reducing dependence on fossil fuels, eliminating waste and reducing their carbon footprints.

Pulp mills and integrated paper makers are in a favourable position to benefit from additional energy project investments. These can reduce exposure to future energy price increases and provide a stable supply of energy. Further, bioenergy projects may represent important new revenue streams, when companies are able to sell surplus power (and heat). As a renewable source of power, such projects may qualify for governmental incentive programmes to increase the generation of fuel and power from biomass, such as those already in place in Europe and China.

Transportation

Transportation costs are largely linked to oil price fluctuations. Lower oil prices in the early part of 2009 translated into freight rate reductions. Lower shipment volumes, however, resulted in fewer sailings and container shortages as vessels were taken out of service. By the end of the year rates and volumes began to stabilise.

Transportation costs are becoming an increasingly important consideration in production location decisions. This trend is already evident in the shift of production facilities toward emerging markets such as China, Eastern Europe and South America, where proximity to fibre and customers in growth markets provides a sourcing and market advantage.
Foreign Exchange Impacts

Global producers are subject to fluctuations in foreign exchange rates, often incurring production costs and liabilities in one currency and selling in another. Trade in most primary forest and paper products is commonly denominated in US dollars which strengthened against a number of major currencies in 2009 — a reversal from the situation in 2008 and continuing the trend seen in the latter half of the year. With the exception of the Chinese Renminbi, currency volatility continued into 2010 as the US dollar weakened against the Canadian dollar, Brazilian Real and Japanese Yen, but strengthened against the Euro.

In 2009, the softening of the Euro and Canadian dollar relative to the US dollar has reduced cost competitiveness of US dollar based forest and paper producers in each respective region. Year over year the US dollar appreciated 5% against the Euro, 7% against the Canadian dollar, and 9% against the Brazilian Real. The Chinese Renminbi remained relatively stable, while the US dollar depreciated by 10% against the Japanese Yen.

Figure 3: Appreciation of Major Currencies Against the US Dollar (Percent)

Source: Oanda.com
Sales and Income

The PwC Top 100 reported total sales of $318 billion in 2009, down 11% from $358 billion in 2008; the first decline in sales since 2006. Consistent with previous years, the 20 largest companies accounted for nearly 60% of total sales.

Operating profit of $16 billion represented a decrease of 25% compared to prior year results. In contrast to the falls in sales and operating profit which reflected the impact of the economic downturn, net income improved from a net loss of $6.5 billion in 2008 to positive earnings of $4.0 billion in 2009. Of the $10.5 billion increase reported over 2008, nearly $3.5 billion can be attributed to the Alternative Fuel Mixture Credit received by kraft pulp producers in the United States. (See the discussion on page 16 for a further analysis of the Credit impact). Otherwise the bottom line improvement mainly reflected a reduction in the level of asset impairment and restructuring charges compared with 2008 when many large players had taken large hits to downsize their operations.

Cash flow from operations totalled $35 billion in 2009, up from $26 billion in 2008, reflecting the focus by companies on cash generation despite the fall off in operating earnings. This focus on cash generation shows in the significant fall in the debt/equity (gearing) ratio — down from 123% in 2008 to 102% in 2009 (see Table 9 on page 25), with almost all regions showing falls in gearing.
Return on Capital Employed (ROCE)

There was little movement in the average ROCE generated by the PwC Top 100, varying from 2.3% in 2008 to 2.7% in 2009, remaining well below an expected return of 10 to 12%. Ten of the PwC Top 100 companies earned a return of 10% or more in 2009 up from eight companies in 2008.

For the second year in a row, Kimberly-Clark Mexico and its parent company Kimberly-Clark topped the list of ROCE leaders in 2009 generating ROCE of 22.1% and 14.7% respectively. One company from Europe, Arctic Paper, a new entrant to the PwC Top 100, joined the list of ROCE leaders this year with a ROCE of 11%.

In recent years, companies based in emerging markets have dominated the list of ROCE leaders. This trend did not continue in 2009, as six companies from the traditional regions of Europe, United States and Japan made the list, compared to four from the emerging regions — Mexico and China.

As in the previous year, emerging Asia led all regions with a ROCE of 6.3%. Latin America and the United States were the only regions where ROCE did not decline in 2009. Year-over-year, ROCE improved from 2.4% to 5.7% for Latin America and from 2.9% to 4.7% for the United States.
Reinvestment Ratio

Reinvestment ratio, calculated as capital investment as a percentage of depreciation, measures the extent that capital investment is replacing aging assets. In broad terms, when the ratio is in excess of 1.0, it indicates an expansion of capacity. A ratio of less than 1.0 indicates capacity shrinkage and suggests that assets are being depreciated faster than they are being replaced.

The overall reinvestment ratio dropped to an average of 0.8 in 2009 for the industry, compared to 1.2 in the two previous years. China continued to have the highest reinvestment ratio at 4.0, down slightly from 4.5 in 2008. Japan and Latin America generated reinvestment ratios of 1.1, while the remaining regions had ratios of less than 1.0. The challenge for many investors continues to be the gap between the cost of capital and lower than average industry returns.

Figure 9: Reinvestment Ratio

Source: PricewaterhouseCoopers LLP
<table>
<thead>
<tr>
<th>Rank '09</th>
<th>Rank '08</th>
<th>Company Name ¹</th>
<th>Country</th>
<th>Sales 2008</th>
<th>Sales 2007</th>
<th>Net Income (Loss) 2008</th>
<th>Net Income (Loss) 2007</th>
<th>ROCE ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>International Paper</td>
<td>US</td>
<td>23,366</td>
<td>24,829</td>
<td>663</td>
<td>(1,282)</td>
<td>4.9</td>
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<tr>
<td>2</td>
<td>2</td>
<td>Kimberly-Clark</td>
<td>US</td>
<td>19,115</td>
<td>19,415</td>
<td>1,884</td>
<td>1,690</td>
<td>14.7</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Svenska Cellulosa (SCA)</td>
<td>Sweden</td>
<td>14,633</td>
<td>16,965</td>
<td>629</td>
<td>857</td>
<td>5.4</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>Oji Paper</td>
<td>Japan</td>
<td>13,535</td>
<td>12,788</td>
<td>114</td>
<td>114</td>
<td>1.3</td>
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<td>5</td>
<td>7</td>
<td>Nippon Paper Group</td>
<td>Japan</td>
<td>12,692</td>
<td>11,753</td>
<td>(251)</td>
<td>55</td>
<td>-0.2</td>
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<tr>
<td>6</td>
<td>4</td>
<td>Stora Enso</td>
<td>Finland</td>
<td>12,478</td>
<td>16,227</td>
<td>(1,227)</td>
<td>(991)</td>
<td>-2.4</td>
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<td>7</td>
<td>5</td>
<td>UPM-Kymmene</td>
<td>Finland</td>
<td>10,768</td>
<td>13,920</td>
<td>236</td>
<td>(283)</td>
<td>0.9</td>
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<tr>
<td>8</td>
<td>8</td>
<td>Smurfit Kappa</td>
<td>Ireland</td>
<td>8,450</td>
<td>10,390</td>
<td>(170)</td>
<td>(73)</td>
<td>3.2</td>
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<tr>
<td>9</td>
<td>10</td>
<td>Mondi Group</td>
<td>UK/South Africa</td>
<td>7,334</td>
<td>8,335</td>
<td>(46)</td>
<td>(310)</td>
<td>3.2</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>Metsä Group</td>
<td>Finland</td>
<td>6,748</td>
<td>9,466</td>
<td>(162)</td>
<td>(313)</td>
<td>-5.0</td>
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<tr>
<td>11</td>
<td>14</td>
<td>MeadWestvaco</td>
<td>US</td>
<td>6,049</td>
<td>6,637</td>
<td>225</td>
<td>90</td>
<td>3.9</td>
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<td>12</td>
<td>11</td>
<td>Sequana Capital ³</td>
<td>France</td>
<td>5,703</td>
<td>7,259</td>
<td>28</td>
<td>(630)</td>
<td>4.3</td>
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<td>13</td>
<td>12</td>
<td>Smurfit-Stone ¹ ⁴ ⁵</td>
<td>US</td>
<td>5,574</td>
<td>7,042</td>
<td>(3)</td>
<td>(2,830)</td>
<td>-0.4</td>
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<td>14</td>
<td>16</td>
<td>Domtar</td>
<td>Canada</td>
<td>5,465</td>
<td>6,394</td>
<td>310</td>
<td>(573)</td>
<td>2.4</td>
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<td>15</td>
<td>18</td>
<td>Sappi</td>
<td>South Africa</td>
<td>5,369</td>
<td>5,863</td>
<td>(177)</td>
<td>102</td>
<td>-1.3</td>
</tr>
<tr>
<td>16</td>
<td>17</td>
<td>PaperX ¹ ⁴ ⁶</td>
<td>Australia</td>
<td>5,177</td>
<td>5,801</td>
<td>(633)</td>
<td>62</td>
<td>-3.1</td>
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<tr>
<td>17</td>
<td>-</td>
<td>Japan Pulp and Paper ⁷</td>
<td>Japan</td>
<td>5,083</td>
<td>4,817</td>
<td>35</td>
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<td>Daio Paper</td>
<td>Japan</td>
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<td>(28)</td>
<td>47</td>
<td>1.3</td>
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<td>19</td>
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<td>Weyerhaeuser ¹ ⁴ ⁸</td>
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<td>4,623</td>
<td>6,692</td>
<td>(296)</td>
<td>(277)</td>
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<td>1.8</td>
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<td>Sumitomo Forestry</td>
<td>Japan</td>
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<tr>
<td>22</td>
<td>13</td>
<td>AbitibiBowater ¹ ⁵</td>
<td>Canada</td>
<td>4,366</td>
<td>6,771</td>
<td>(1,553)</td>
<td>(2,234)</td>
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<td>23</td>
<td>25</td>
<td>Graphic Packaging</td>
<td>US</td>
<td>4,096</td>
<td>4,079</td>
<td>56</td>
<td>(100)</td>
<td>3.7</td>
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<td>24</td>
<td>31</td>
<td>Unicharm</td>
<td>Japan</td>
<td>3,716</td>
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<td>Sonoco</td>
<td>US</td>
<td>3,597</td>
<td>4,122</td>
<td>151</td>
<td>165</td>
<td>8.1</td>
</tr>
<tr>
<td>26</td>
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<td>Temple-Inland</td>
<td>US</td>
<td>3,577</td>
<td>3,884</td>
<td>206</td>
<td>(8)</td>
<td>2.2</td>
</tr>
<tr>
<td>27</td>
<td>27</td>
<td>Cascades</td>
<td>Canada</td>
<td>3,416</td>
<td>3,792</td>
<td>53</td>
<td>(52)</td>
<td>4.6</td>
</tr>
<tr>
<td>28</td>
<td>28</td>
<td>DS Smith</td>
<td>UK</td>
<td>3,302</td>
<td>3,650</td>
<td>(19)</td>
<td>142</td>
<td>3.7</td>
</tr>
<tr>
<td>29</td>
<td>19</td>
<td>Norske Skog</td>
<td>Norway</td>
<td>3,258</td>
<td>4,762</td>
<td>(193)</td>
<td>(488)</td>
<td>0.5</td>
</tr>
<tr>
<td>30</td>
<td>35</td>
<td>CMPC ¹ ³ ⁷</td>
<td>Chile</td>
<td>3,124</td>
<td>3,269</td>
<td>281</td>
<td>283</td>
<td>3.2</td>
</tr>
<tr>
<td>31</td>
<td>28</td>
<td>Arauco ¹ ³ ⁷</td>
<td>Chile</td>
<td>3,113</td>
<td>3,714</td>
<td>301</td>
<td>399</td>
<td>4.1</td>
</tr>
<tr>
<td>32</td>
<td>22</td>
<td>NewPage Corporation</td>
<td>US</td>
<td>3,106</td>
<td>4,356</td>
<td>(323)</td>
<td>(142)</td>
<td>-6.1</td>
</tr>
<tr>
<td>33</td>
<td>36</td>
<td>Rock-Tenn</td>
<td>US</td>
<td>2,812</td>
<td>2,839</td>
<td>222</td>
<td>82</td>
<td>10.4</td>
</tr>
<tr>
<td>34</td>
<td>-</td>
<td>Fibria ⁴ ⁵ ⁶ ⁸</td>
<td>Brazil</td>
<td>2,800</td>
<td>1,366</td>
<td>513</td>
<td>(405)</td>
<td>5.5</td>
</tr>
<tr>
<td>35</td>
<td>30</td>
<td>Burgo</td>
<td>Italy</td>
<td>2,781</td>
<td>3,567</td>
<td>(17)</td>
<td>(130)</td>
<td>2.5</td>
</tr>
<tr>
<td>36</td>
<td>42</td>
<td>Mitsubishi Paper</td>
<td>Japan</td>
<td>2,704</td>
<td>2,508</td>
<td>12</td>
<td>35</td>
<td>1.0</td>
</tr>
<tr>
<td>37</td>
<td>34</td>
<td>Holmen</td>
<td>Sweden</td>
<td>2,385</td>
<td>2,970</td>
<td>133</td>
<td>99</td>
<td>4.0</td>
</tr>
<tr>
<td>38</td>
<td>32</td>
<td>West Fraser Timber</td>
<td>Canada</td>
<td>2,301</td>
<td>3,010</td>
<td>(297)</td>
<td>(129)</td>
<td>-4.4</td>
</tr>
<tr>
<td>39</td>
<td>41</td>
<td>Mayr-Melnhof Karton</td>
<td>Austria</td>
<td>2,234</td>
<td>2,547</td>
<td>131</td>
<td>139</td>
<td>8.1</td>
</tr>
<tr>
<td>40</td>
<td>37</td>
<td>Ahlstrom</td>
<td>Finland</td>
<td>2,227</td>
<td>2,652</td>
<td>(46)</td>
<td>(26)</td>
<td>0.7</td>
</tr>
<tr>
<td>41</td>
<td>39</td>
<td>Sodra ³</td>
<td>Sweden</td>
<td>2,204</td>
<td>2,610</td>
<td>62</td>
<td>82</td>
<td>1.0</td>
</tr>
<tr>
<td>42</td>
<td>48</td>
<td>Shandong Chenming ³ ⁴</td>
<td>China</td>
<td>2,163</td>
<td>2,225</td>
<td>126</td>
<td>157</td>
<td>4.4</td>
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<tr>
<td>43</td>
<td>44</td>
<td>Packaging Corp of America</td>
<td>US</td>
<td>2,148</td>
<td>2,361</td>
<td>266</td>
<td>136</td>
<td>8.6</td>
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<tr>
<td>44</td>
<td>46</td>
<td>Suzano</td>
<td>Brazil</td>
<td>2,004</td>
<td>2,264</td>
<td>445</td>
<td>(251)</td>
<td>8.5</td>
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<tr>
<td>45</td>
<td>-</td>
<td>Boise Inc. ⁸</td>
<td>US</td>
<td>1,978</td>
<td>2,071</td>
<td>154</td>
<td>(46)</td>
<td>6.2</td>
</tr>
<tr>
<td>46</td>
<td>57</td>
<td>Hokkaido Paper</td>
<td>Japan</td>
<td>1,953</td>
<td>1,675</td>
<td>21</td>
<td>40</td>
<td>1.9</td>
</tr>
<tr>
<td>47</td>
<td>40</td>
<td>Pliester</td>
<td>Germany</td>
<td>1,927</td>
<td>2,554</td>
<td>(97)</td>
<td>9</td>
<td>-0.2</td>
</tr>
<tr>
<td>48</td>
<td>45</td>
<td>The Lecta Group</td>
<td>France</td>
<td>1,925</td>
<td>2,354</td>
<td>12</td>
<td>(119)</td>
<td>4.0</td>
</tr>
<tr>
<td>49</td>
<td>52</td>
<td>Nine Dragons Paper</td>
<td>China</td>
<td>1,918</td>
<td>2,035</td>
<td>243</td>
<td>271</td>
<td>5.1</td>
</tr>
<tr>
<td>50</td>
<td>43</td>
<td>Cantor</td>
<td>Canada</td>
<td>1,868</td>
<td>2,466</td>
<td>(63)</td>
<td>(326)</td>
<td>-2.0</td>
</tr>
</tbody>
</table>

¹ Place of Incorporation
² Return on Capital Employed
⁴ Includes Special Items
⁵ Includes Extraordinary Items
⁶ Includes Discontinued Segment
⁷ Includes Significant Non-Recurring Items
⁸ Includes Significant Excluded Items

Table 2: Top 100 Global Forest, Paper & Packaging Industry Companies
(US $ millions)
### Raw Text

**Rank '09 Rank '08 Company Name 1 Country Sales 2009 $ Sales 2008 $ Net Income (Loss) 2009 $ Net Income (Loss) 2008 $ ROCE 3% 2009 2008**

51 51 Kimberly-Clark Mexico Mexico 1,828 2,098 307 301 22.1 22.5
52 38 Sonae Industra 1 Portugal 1,790 2,603 (84) (159) -6.2 -3.2
53 68 Hankol Paper 3, 4 South Korea 1,732 1,374 33 2 5.1 2.2
54 50 Mythykoski Finland 1,691 2,164 (86) (31) -1.3 1.1
55 49 Universal Forest Products US 1,673 2,232 24 4 4.1 2.4
56 59 Daiken Japan 1,606 1,616 6 8 2.3 1.4
57 47 Tembec Canada 1,573 2,243 (202) (142) -18.1 -7.2
58 61 Tomoku Japan 1,565 1,417 7 13 1.4 2.1
59 58 Portugal 1,528 1,665 146 193 4.9 7.0
60 56 Klabin Brazil 1,501 1,725 169 (194) 6.4 2.7
61 54 Verco Paper Holdings US 1,361 1,767 106 (63) -0.7 2.7
62 67 Clearwater Paper US 1,250 1,256 183 10 11.8 3.2
63 74 Lee & Man Paper China 1,245 1,155 39 185 2.8 12.3
64 60 Sino Group Thailand 1,239 1,442 66 51 6.6 5.3
65 84 Sino Forest Canada/China 1,238 896 287 229 10.5 12.9
66 66 PH Glattfelter US 1,197 1,273 124 58 4.4 5.8
67 62 Yuen Foong Yu Paper Taiwan 1,179 1,381 55 (11) 4.3 0.3
68 76 Chetsu Pulp & Paper Japan 1,178 1,099 7 12 1.1 1.9
69 69 Rayonier 1, 4 US 1,169 1,271 313 149 8.8 10.0
70 72 Kinowki (Korsnas) 5 Sweden 1,106 1,186 203 256 3.8 4.5
71 55 Catalyst Canada 1,059 1,746 (4) (208) 2.5 -2.1
72 63 Louisiana-Pacific US 1,055 1,376 (121) (579) -2.8 -9.3
73 80 Nampak 6 South Africa 1,052 1,041 (62) (30) -6.2 3.1
74 71 Wausau-Moines Paper US 1,032 1,192 21 (16) 3.4 0.9
75 70 Billerud Sweden 1,024 1,197 22 23 3.5 4.0
76 64 Moelven Norway 994 1,369 7 15 2.2 5.3
77 79 Masins SA 1, 4 Chile 914 1,058 40 2 4.3 3.1
78 91 The Pack China 871 816 33 27 9.2 9.3
79 88 Shan Dong Sun Paper China 870 836 70 33 9.7 8.3
80 78 Mercer International Canada 865 1,060 (86) (107) -2.8 -3.8
81 82 Appleton Papers US 862 987 25 (97) 3.2 -2.1
82 86 Shandong Huatai Paper China 851 866 160 53 12.1 7.1
83 73 Plum Creek Timber Co. 6 US 808 1,182 (27) 5 1.8 2.0
84 75 Sveaskog Sweden 796 1,112 254 216 5.6 3.1
85 85 Groupe Gascogne France 770 886 1 2 0.2 1.2
86 81 ENCE 3, 4 Spain 763 1,018 (216) 7 -7.9 1.2
87 94 Grupo Industrial Durango 3, 4 Mexico 761 930 117 (232) 12.0 -14.4
88 89 Buckeye Technologies US 755 826 (69) 47 0.9 7.8
89 87 Heinzei Holding Austria 746 851 8 52 2.3 9.9
90 95 Swisset-Mauduit US 741 768 36 1 12.0 3.9
91 92 Exacompta Clairefontaine France 740 804 6 8 1.3 1.5
92 - Duratek 7 Brazil 729 290 50 42 5.4 11.1
93 83 Norbord Canada 718 943 (58) (116) -3.8 -5.9
94 - DLH Group 8 Denmark 682 988 (141) 45 -25.7 -2.5
95 - Kapstone Paper and Packaging 8 US 633 525 80 20 -5.5 7.4
96 99 Reno De Medic 1 Italy 597 664 (10) (9) -0.1 -2.7
97 100 Ballarp Industries India 593 654 35 69 5.4 8.5
98 - Arctic Paper 1 Poland 583 530 41 21 11.3 5.6
99 97 Corticeira Amorim Portugal 579 689 7 9 3.1 3.5
100 77 Cheng Loong Taiwan 554 745 34 3 5.0 0.7

**Total** 317,770 358,284 4,021 (6,524) 2.7 2.3

**Notes**

1. All companies have December 31, 2009 year ends except for those listed below.
March 31, 2009: All Japanese companies
April 30, 2009: DS Smith
2. Return on Capital Employed is calculated as net income before unusual items, minority interest, and interest expense, on an after tax basis, divided by average total assets less average non-interest bearing current liabilities.
3. 2008 Sales have been restated.
4. 2008 Net Income (Loss) has been restated.
5. Note that Fibria is the result of a merger between VCP and Arauc. Fibria's year-over-year results are not directly comparable since 2009 reflects the combined performance of both VCP and Arauc, while 2008 excludes Arauc and reflects the performance of VCP only.
6. Weyerhaeuser and Plum Creek results exclude their real estate divisions.
7. Results are reported for identifiable forest segments company-wide expenses.
8. New additions to the PwC Top 100 this year.
9. Excluding $2.0 million gain from change in fair value of financial assets and holding companies.
10. AbitibiBowater aims to emerge from Chapter 11 in the fall of 2010. Smurfit Stone emerged from Chapter 11 in the 2nd quarter of 2010.
Results by Country/Region

Europe

Annual and Market Overview

The Euro area was hit harder than the US by the global recession and experienced a steeper decline in GDP from growth of 0.5% in 2008 to a negative rate of 4.0% in 2009. The Euro area returned to positive growth in 2009. The Euro area returned to positive growth from growth of 0.5% in 2008 to a negative rate of 4.0% in the third quarter of 2009 but the pace of recovery lagged behind other advanced economies. Uncertainty lingers in financial markets, with concerns over rising sovereign debt levels casting a shadow over long-term prospects.

Table 3: Top European Forest, Paper & Packaging Companies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Svenska Cellulosa (SCA)</td>
<td>Sweden</td>
<td>$14,633</td>
<td>$16,965</td>
<td>€629</td>
<td>€857</td>
<td>5.4%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Stora Enso</td>
<td>Finland</td>
<td>$12,478</td>
<td>$16,227</td>
<td>(1,227)</td>
<td>(991)</td>
<td>-2.4%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>UPM-Kymmene</td>
<td>Finland</td>
<td>$10,768</td>
<td>$13,920</td>
<td>€236</td>
<td>€263</td>
<td>0.9%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Smurfit Kappa</td>
<td>Ireland</td>
<td>$8,450</td>
<td>$10,390</td>
<td>€170</td>
<td>€73</td>
<td>3.2%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Mondi Group</td>
<td>UK/South Africa</td>
<td>$7,334</td>
<td>$9,335</td>
<td>(46)</td>
<td>(310)</td>
<td>3.2%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Metsalitto</td>
<td>Finland</td>
<td>$6,748</td>
<td>$9,466</td>
<td>(162)</td>
<td>(313)</td>
<td>-5.0%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Sequana Capital</td>
<td>France</td>
<td>$5,703</td>
<td>$7,259</td>
<td>€28</td>
<td>€830</td>
<td>4.3%</td>
<td>-3.0%</td>
</tr>
<tr>
<td>DS Smith</td>
<td>UK</td>
<td>$3,302</td>
<td>$3,650</td>
<td>(19)</td>
<td>142</td>
<td>3.7%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Norske Skog</td>
<td>Norway</td>
<td>$3,258</td>
<td>$4,762</td>
<td>€193</td>
<td>€486</td>
<td>0.5%</td>
<td>-1.4%</td>
</tr>
<tr>
<td>Burgo</td>
<td>Italy</td>
<td>$2,781</td>
<td>$3,567</td>
<td>(17)</td>
<td>(130)</td>
<td>2.5%</td>
<td>-1.6%</td>
</tr>
<tr>
<td>Holman</td>
<td>Sweden</td>
<td>$2,385</td>
<td>$2,970</td>
<td>€133</td>
<td>€99</td>
<td>4.0%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Mayr-Melnhof Karten</td>
<td>Austria</td>
<td>$2,224</td>
<td>$2,547</td>
<td>€131</td>
<td>€139</td>
<td>8.1%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Ahlstrom</td>
<td>Finland</td>
<td>$2,222</td>
<td>$2,652</td>
<td>(46)</td>
<td>(26)</td>
<td>0.7%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Sodra</td>
<td>Sweden</td>
<td>$2,204</td>
<td>$2,610</td>
<td>€62</td>
<td>€82</td>
<td>1.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Pfeifferer</td>
<td>Germany</td>
<td>$1,927</td>
<td>$2,554</td>
<td>(97)</td>
<td>(9)</td>
<td>-0.2%</td>
<td>-4.1%</td>
</tr>
<tr>
<td>The Lecta Group</td>
<td>France</td>
<td>$1,925</td>
<td>$2,354</td>
<td>€12</td>
<td>(119)</td>
<td>4.0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Sunae Industria</td>
<td>Portugal</td>
<td>$1,790</td>
<td>$2,603</td>
<td>(84)</td>
<td>(159)</td>
<td>-6.2%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>Myllykoski</td>
<td>Finland</td>
<td>$1,691</td>
<td>$2,164</td>
<td>(86)</td>
<td>(31)</td>
<td>-1.3%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Portugal</td>
<td>Portugal</td>
<td>$1,528</td>
<td>$1,665</td>
<td>€146</td>
<td>€193</td>
<td>4.9%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Kinnvik (Korsnas)</td>
<td>Sweden</td>
<td>$1,108</td>
<td>$1,196</td>
<td>€203</td>
<td>€256</td>
<td>3.8%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Billerud</td>
<td>Sweden</td>
<td>$1,024</td>
<td>$1,197</td>
<td>€22</td>
<td>€23</td>
<td>3.5%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Moelven</td>
<td>Norway</td>
<td>$994</td>
<td>$1,369</td>
<td>7</td>
<td>15</td>
<td>2.2%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Sveaskog</td>
<td>Sweden</td>
<td>$796</td>
<td>$1,112</td>
<td>€254</td>
<td>€216</td>
<td>5.6%</td>
<td>3.1%</td>
</tr>
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<td>Groupe Gascogne</td>
<td>France</td>
<td>$770</td>
<td>$896</td>
<td>1</td>
<td>2</td>
<td>0.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>ENCE</td>
<td>Spain</td>
<td>$763</td>
<td>$1,018</td>
<td>(216)</td>
<td>7</td>
<td>-7.9%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Reinzel Holding</td>
<td>Austria</td>
<td>$746</td>
<td>$851</td>
<td>9</td>
<td>52</td>
<td>2.3%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Exacompta Clairefontaine</td>
<td>France</td>
<td>$740</td>
<td>$804</td>
<td>6</td>
<td>8</td>
<td>1.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>DLH Group</td>
<td>Denmark</td>
<td>$682</td>
<td>$988</td>
<td>(141)</td>
<td>45</td>
<td>-25.7%</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Reno De Medici</td>
<td>Italy</td>
<td>$597</td>
<td>$664</td>
<td>(10)</td>
<td>(9)</td>
<td>-0.1%</td>
<td>-2.7%</td>
</tr>
<tr>
<td>Arctic Paper</td>
<td>Poland</td>
<td>$583</td>
<td>$530</td>
<td>43</td>
<td>21</td>
<td>11.3%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Corticeira Amorim</td>
<td>Portugal</td>
<td>$579</td>
<td>$689</td>
<td>7</td>
<td>9</td>
<td>3.1%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Total                      |                 | $102,748   | $128,964   | €585                   | (1,367)                | 1.6%      | 2.7%      |

Note: Source: PricewaterhouseCoopers LLP

Weak and oversupplied markets for forest, paper and packaging products prevailed through the first half of the year as the global recession dampened demand. Construction activity was subdued, resulting in decreased prices for wood products. Interior decoration and renovations markets remained moderate. Pulp markets remained oversupplied as paper usage declined. Demand for printing and writing paper and newsprint each dropped by 15% in Europe compared to the previous year. The substitution of lower grades in the coated magazine sector resulted in an 18% demand decline and demand for corrugated board dropped with reduced industrial and export activity.
By the second half of the year, the situation was markedly different as prices increased and demand stabilised, albeit well below pre-crisis levels. Exports to Asian markets increased and the global economy began to recover.

In 2009, European companies with strong balance sheets continued to invest in emerging regions where the lower cost base and prospects for growth presented favourable conditions for investment. Consistent with the shift of manufacturing capacity from west to east, Mondi Group sold its holdings in packaging businesses in France and completed installations of new paper machines in Poland and the Czech Republic. The company has also undertaken the modernisation of the Syktyvkar pulp and paper mill in Russia.

Conversely, European companies also reshuffled assets and exited emerging markets for strategic reasons and to help shore up balance sheets. Metsaliitto sold its stake in the Metsa Botnia pulp mill and plantations in Uruguay to UPM-Kymmene for $1.2 billion. In May 2009 Chile’s Arauco and Stora Enso formed a joint venture and announced the $344 million acquisition of Grupo ENCE’s industrial forestry assets in Uruguay. Sonae Industria exited Latin America, while Norske Skog sold four mills in Asia to improve its financial position.

Financial Performance

Sales by the 31 European-based companies included in the PwC Top 100 amounted to $103 billion, down 20% from the $129 billion reported for 2008. This represented a third of sales of the PwC Top 100 and marks the third consecutive year that Europe accounts for the largest share of total sales. The drop in sales is less pronounced when reported in Euros, due to a 5% appreciation of the US dollar against the Euro in 2009. Sales in Euros decreased by 16% in 2009 to €74 billion, down from €88 billion in 2008. With the exception of Arctic Paper, a new entrant to the PwC Top 100, every company in the region reported a reduction in sales. DLH-Group of Denmark, supplier of timber and timber products, was another new addition to PwC Top 100 in 2009, while Setra Group of Sweden slipped from the list.

Net losses for European companies amounted to $0.6 billion in 2009, down from losses of $1.4 billion reported in 2008. In spite of weak demand and prices, three companies in the region returned to profitability in 2009 and 17 companies posted positive earnings. Sequana Capital, which reported the steepest decline in net income in last year’s Survey, reported the largest swing in profitability with net income of $28 million in 2009 compared to a net loss of $630 million in 2008. The improvement in Sequana Capital’s net income is due mainly to the reduction of the unusual items (discontinued operations, impairment and restructuring charges) which caused the prior year loss.

ROCE for the region was 1.6% in 2009, down from 2.7% in 2008. Arctic Paper achieved the highest ROCE for the region at 11.3% and a robust increase in net income due mainly to the consolidation of the results of a new paper mill in Germany. Revenues from this asset, acquired in December 2008, were not included in the first three quarters of 2008. In addition, Arctic Paper has benefited from good sales results and favourable exchange rates.
United States

Annual and Market Overview

The US economy experienced one of the single worst years in post war history. US GDP fell to negative 2.5% in 2009 from growth of 0.5% in 2008. The rate of unemployment rose from 7.7% at the start of 2009, peaking at 10.1% in October of 2009, more than double the 5.0% rate at the start of the recession in December 2007. A distressed US housing market continued to falter with record numbers of foreclosures and falling home prices. Housing starts dipped below half a million starts to their lowest level in decades.


Results for the US industry in 2009 were strongly influenced by the Alternative Fuel Mixture Credit. Since the 1930’s, kraft pulp mills have burned black liquor, a by-product of the pulping process, to generate steam and/or electricity. In 2005, the US Congress introduced legislation to encourage the use of alternative fuels

Figure 10: US Housing Starts 1
(Thousands of units)

Figure 11: North American Building Materials
(Newsprint 30lb delivered to US East, US $ per tonne)

Figure 12: North American Newsprint Prices
(Newsprint 30lb delivered to US East, US $ per tonne)

1. Seasonally-adjusted annual rate.

Source: US Census Bureau

Source: Pulp and Newsprint – RISI PPI Pulp & Paper Week

Source: Lumber – Random Lengths/Yardstick
such as ethanol and other biofuels through a tax credit. Subsequent amendments enabled kraft pulp producers to qualify for credits under the legislation, with producers recognising the majority of these credits in 2009. Altogether, almost 40 pulp and paper companies received cash payments of approximately $6.5 billion. The tax credit effectively reduced the costs for qualifying mills to levels comparable to the lowest cost producers in the world. The tax credit expired at the end of December 2009.

Financial Performance

Aggregate sales dropped to $93 billion for the 24 US-based companies, down 10% relative to 2008 sales of $103 billion. This represented 29% of the PwC Top 100 sales, unchanged from 2008 in spite of lower sales reported by most companies in the region. KapStone Paper and Packaging was a new addition to this year’s PwC Top 100, while Caraustar Industries slipped from the list.

Net income reported by the 24 US-based companies increased to $3.9 billion in 2009, a dramatic reversal from a net loss of $3 billion in 2008. All but five US-based companies reported improvement in earnings, with notable increases from International Paper and Smurfit-Stone of close to $2 billion and $3 billion respectively.

Table 4: Top US Forest, Paper & Packaging Companies

(US $ millions)

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</tr>
</thead>
<tbody>
<tr>
<td>International Paper</td>
<td>23,366</td>
<td>24,829</td>
<td>-1,463</td>
<td>663</td>
<td>(1,282)</td>
<td>1,945</td>
<td>4.9</td>
<td>1.5</td>
<td>3.4</td>
</tr>
<tr>
<td>Kimberly-Clark</td>
<td>19,115</td>
<td>19,415</td>
<td>-299</td>
<td>1,884</td>
<td>1,690</td>
<td>194</td>
<td>14.7</td>
<td>14.1</td>
<td>0.6</td>
</tr>
<tr>
<td>MeadWestvaco</td>
<td>6,049</td>
<td>6,637</td>
<td>-588</td>
<td>225</td>
<td>90</td>
<td>135</td>
<td>3.9</td>
<td>2.8</td>
<td>1.1</td>
</tr>
<tr>
<td>Smurfit-Stone</td>
<td>5,574</td>
<td>7,042</td>
<td>-1,468</td>
<td>(3)</td>
<td>(2,830)</td>
<td>2,827</td>
<td>-0.4</td>
<td>-16.2</td>
<td>15.8</td>
</tr>
<tr>
<td>Weyerhaeuser</td>
<td>4,623</td>
<td>6,692</td>
<td>-2,069</td>
<td>(296)</td>
<td>(277)</td>
<td>29</td>
<td>-1.3</td>
<td>0.6</td>
<td>-1.7</td>
</tr>
<tr>
<td>Graphic Packaging</td>
<td>4,096</td>
<td>4,079</td>
<td>17</td>
<td>56</td>
<td>(190)</td>
<td>246</td>
<td>3.7</td>
<td>1.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Sonoco</td>
<td>3,597</td>
<td>4,122</td>
<td>-525</td>
<td>151</td>
<td>165</td>
<td>14</td>
<td>8.1</td>
<td>10.3</td>
<td>-2.2</td>
</tr>
<tr>
<td>Temple-Inland</td>
<td>3,577</td>
<td>3,884</td>
<td>-307</td>
<td>206</td>
<td>(8)</td>
<td>214</td>
<td>2.2</td>
<td>0.9</td>
<td>1.3</td>
</tr>
<tr>
<td>NewPage Corporation</td>
<td>3,106</td>
<td>4,356</td>
<td>-1,250</td>
<td>(323)</td>
<td>(142)</td>
<td>181</td>
<td>-6.1</td>
<td>1.8</td>
<td>-7.9</td>
</tr>
<tr>
<td>Rock-Tenn</td>
<td>2,812</td>
<td>2,839</td>
<td>-27</td>
<td>222</td>
<td>82</td>
<td>140</td>
<td>10.4</td>
<td>7.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Packaging Corp of America</td>
<td>2,148</td>
<td>2,361</td>
<td>-213</td>
<td>266</td>
<td>136</td>
<td>130</td>
<td>8.6</td>
<td>9.1</td>
<td>-0.5</td>
</tr>
<tr>
<td>Boise Inc.</td>
<td>1,978</td>
<td>2,071</td>
<td>-94</td>
<td>154</td>
<td>(46)</td>
<td>100</td>
<td>6.2</td>
<td>1.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Universal Forest Products</td>
<td>1,673</td>
<td>2,232</td>
<td>-559</td>
<td>24</td>
<td>4</td>
<td>20</td>
<td>4.1</td>
<td>2.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Verso Paper Holdings</td>
<td>1,361</td>
<td>1,767</td>
<td>-406</td>
<td>106</td>
<td>(83)</td>
<td>190</td>
<td>-0.7</td>
<td>2.7</td>
<td>-3.4</td>
</tr>
<tr>
<td>Clearwater Paper</td>
<td>1,250</td>
<td>1,256</td>
<td>-6</td>
<td>183</td>
<td>10</td>
<td>173</td>
<td>11.8</td>
<td>3.2</td>
<td>8.6</td>
</tr>
<tr>
<td>PH Glatfelter</td>
<td>1,197</td>
<td>1,273</td>
<td>-76</td>
<td>124</td>
<td>58</td>
<td>66</td>
<td>4.4</td>
<td>5.8</td>
<td>-1.4</td>
</tr>
<tr>
<td>Rayonier</td>
<td>1,169</td>
<td>1,271</td>
<td>-102</td>
<td>313</td>
<td>149</td>
<td>164</td>
<td>8.8</td>
<td>9.5</td>
<td>-0.7</td>
</tr>
<tr>
<td>Louisiana-Pacific</td>
<td>1,055</td>
<td>1,376</td>
<td>-321</td>
<td>(121)</td>
<td>(579)</td>
<td>458</td>
<td>-2.8</td>
<td>-8.3</td>
<td>5.5</td>
</tr>
<tr>
<td>Wausau-Mosinee Paper</td>
<td>1,032</td>
<td>1,192</td>
<td>-160</td>
<td>21</td>
<td>(16)</td>
<td>37</td>
<td>3.4</td>
<td>0.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Appleton Papers</td>
<td>862</td>
<td>967</td>
<td>-105</td>
<td>25</td>
<td>(97)</td>
<td>32</td>
<td>3.2</td>
<td>-2.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Plum Creek Timber Co.</td>
<td>808</td>
<td>1,182</td>
<td>-374</td>
<td>(27)</td>
<td>5</td>
<td>22</td>
<td>1.8</td>
<td>2.0</td>
<td>-0.2</td>
</tr>
<tr>
<td>Buckeye Technologies</td>
<td>755</td>
<td>826</td>
<td>-71</td>
<td>(65)</td>
<td>47</td>
<td>(198)</td>
<td>0.9</td>
<td>7.8</td>
<td>-6.9</td>
</tr>
<tr>
<td>Schwelitz-Mauduit</td>
<td>741</td>
<td>768</td>
<td>-27</td>
<td>36</td>
<td>1</td>
<td>35</td>
<td>12.0</td>
<td>3.9</td>
<td>8.1</td>
</tr>
<tr>
<td>KapStone Paper and Packaging</td>
<td>633</td>
<td>525</td>
<td>108</td>
<td>80</td>
<td>20</td>
<td>60</td>
<td>-5.5</td>
<td>7.4</td>
<td>-12.9</td>
</tr>
<tr>
<td>Total</td>
<td>92,577</td>
<td>102,962</td>
<td>-10,385</td>
<td>3,964</td>
<td>(2,983)</td>
<td>6,947</td>
<td>4.7</td>
<td>2.9</td>
<td>1.8</td>
</tr>
</tbody>
</table>

1. Estimate based on 2009 SEC filings
Of the approximately $6.5 billion in Alternative Fuel Mixture Credits received by North American companies, $5.7 billion was received by the PwC Top 100 in 2009. US-based companies received cash payments of $4.9 billion, while non-US based companies received the $0.8 billion balance. After adjusting for the effect of the tax credit, the overall net income for the US region for 2009 drops to a net loss of $0.7 billion, reflecting the substantial impact to the bottom line for companies with qualifying operations.

ROCE for the US region, excluding the effect of the tax credit, amounted to 4.7% in 2009, up from 2.9% in 2008. Kimberly-Clark achieved the region’s highest ROCE at 14.7% followed by Schweitzer-Mauduit, Clearwater Paper, and Rock-Tenn at 12.0%, 11.8% and 10.4% respectively. Schweitzer-Mauduit attributed the change to improved product mix and cost savings programs, while Clearwater Paper and RockTenn cited cost savings.

Evident in the debt to equity comparison in Table 9 on page 25, is that many US-based companies used cash receipts from the tax credit to pay down debt. Balance sheet gearing decreased significantly from 218% to an estimated 153% at the end of 2009, however the gearing ratio remains among the highest of any region.
Japan

Japan’s GDP contracted to negative 5.3% in 2009 from negative 0.5% in 2008, but returned to positive growth by the final quarter of 2009. Japanese exports, the country’s main growth driver, plummeted during the global economic slowdown and like many other countries, the Japanese government spent hundreds of billions of dollars in stimulus spending to support the economy. Concern over the country’s finances looms; the level of public debt in Japan is now the highest of all industrialised nations and stands at almost 200% of GDP. Over the medium and long-term Japan faces reduction in domestic demand as the overall population is aging and in decline. Companies have stepped up efforts to pursue business growth outside of their domestic market, with China being a favoured location for investment. Oji Paper, for example is constructing a state of the art paper mill in Nantong, China and plans further expansion in East Asia through merger and acquisition activity. Nippon Paper and Sumitomo Forestry made acquisitions in Australasia in the past year.

Prompted by concerns over energy costs, companies based in Japan such as Nippon Paper, Rengo, and Daiken have taken measures to reduce dependence on crude oil and improve their carbon emissions footprint by increasing the installation of, and conversion to, alternative energy boilers.

Financial Performance

US dollar sales for the 13 Japanese companies for the year ended March 31, 2009 improved marginally to $59 billion in 2009, due to the strengthening of the currency relative to the US dollar. Reported in Yen, sales decreased 3% from 2008. Sales for the 13 companies in the region represented almost 20% of the PwC Top 100 sales. Japan Pulp and Paper is a new entrant to the PwC Top 100 with sales of $5 billion.


Unicharm and The Pack generated the highest ROCE at 10.7% and 9.2%, well above the 1.4% average for the region.

Japanese companies report on fiscal years ending on March 31. Their financial data included in this Survey is for the 12 months ended March 31, 2009. Results for the region may not be directly comparable to other regions where the end of the fiscal year generally coincides with the calendar year.

Table 5: Top Japanese Forest, Paper & Packaging Companies
(US $ millions)

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</tr>
</thead>
<tbody>
<tr>
<td>Oji Paper</td>
<td>13,535</td>
<td>12,788</td>
<td>13</td>
<td>114</td>
<td>1.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Nippon Paper Group</td>
<td>12,692</td>
<td>11,753</td>
<td>(251)</td>
<td>55</td>
<td>-0.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Japan Pulp and Paper</td>
<td>5,083</td>
<td>4,817</td>
<td>35</td>
<td>15</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Daio Paper</td>
<td>4,976</td>
<td>4,421</td>
<td>(2)</td>
<td>47</td>
<td>1.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Rengo</td>
<td>4,558</td>
<td>4,353</td>
<td>80</td>
<td>56</td>
<td>1.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Sumitomo Forestry</td>
<td>4,422</td>
<td>4,374</td>
<td>2</td>
<td>28</td>
<td>0.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Unicharm</td>
<td>3,716</td>
<td>3,268</td>
<td>183</td>
<td>162</td>
<td>10.7</td>
<td>9.8</td>
</tr>
<tr>
<td>Mitsubishi Paper</td>
<td>2,704</td>
<td>2,508</td>
<td>12</td>
<td>35</td>
<td>1.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Hokoku Paper</td>
<td>1,953</td>
<td>1,675</td>
<td>21</td>
<td>40</td>
<td>1.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Daiken</td>
<td>1,606</td>
<td>1,616</td>
<td>6</td>
<td>8</td>
<td>2.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Tomoku</td>
<td>1,565</td>
<td>1,417</td>
<td>7</td>
<td>13</td>
<td>1.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Chuetsu Pulp &amp; Paper</td>
<td>1,178</td>
<td>1,099</td>
<td>7</td>
<td>12</td>
<td>1.1</td>
<td>1.9</td>
</tr>
<tr>
<td>The Pack</td>
<td>871</td>
<td>816</td>
<td>33</td>
<td>27</td>
<td>9.2</td>
<td>9.3</td>
</tr>
<tr>
<td>Total</td>
<td>58,859</td>
<td>54,905</td>
<td>122</td>
<td>612</td>
<td>1.4</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Source: PricewaterhouseCoopers LLP
Canada

Annual and market overview

The pace of GDP growth slowed in Canada from 0.4% in 2008 to negative 2.7% in 2009. While Canada fared better than many industrialised countries during the global recession, demand for Canadian exports declined by 22%. Still, by the final quarter of 2009, GDP rebounded, with growth at an annualised rate of 4.9%, led by the strongest level of domestic demand of all G7 countries.

Wood products manufacturers faced another challenging year in 2009, but by the end of the year markets began to show signs of modest improvement. The volume of wood product exports from Canadian sawmills in 2009 declined to almost half of the level of shipments in 2007. The US remains the primary destination for wood product exports from Canada. The Canadian industry, in partnership with Canadian governments and industry associations, is currently promoting the use and adoption of wood as a building material in construction in China, with some success. Volumes of wood products shipped to China from Canadian sawmills more than doubled in 2009, although they remain only a fraction of the volumes exported to the US.

A battered pulp and paper industry in Canada experienced an unprecedented number of restructurings in 2009. AbitibiBowater, the largest producer of newsprint in North America, Marathon Pulp and Terrace Bay Pulp all filed for creditor protection in the first quarter of 2009. Fraser Papers followed in June 2009.

In response to lobbying from Canadian pulp and paper producers competing with companies receiving Alternative Fuel Mixture Credits in the US, the Government of Canada introduced the Pulp and Paper Green Transformation Program, in the fall of 2009. The program provides CAD 1 billion of funding for investment in projects to improve energy efficiency and environmental performance to pulp and paper companies that produce black liquor. Twenty-four companies representing 38 pulp and paper mills across Canada qualified for credits under the program. Domtar and AbitibiBowater were among the Canadian-based companies with Canadian operations which qualified under the Green Transformation Program and also had US operations which qualified for the Alternative Fuel Mixture Credit.

Table 6: Top Canadian Forest, Paper & Packaging Companies

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Domtar</td>
<td>5,465</td>
<td>6,394</td>
<td>310</td>
<td>(573)</td>
<td>2.4</td>
<td>0.0</td>
</tr>
<tr>
<td>AbitibiBowater</td>
<td>4,366</td>
<td>6,771</td>
<td>(1,553)</td>
<td>(2,234)</td>
<td>-9.9</td>
<td>-9.3</td>
</tr>
<tr>
<td>Cascades</td>
<td>3,416</td>
<td>3,792</td>
<td>53</td>
<td>(52)</td>
<td>4.6</td>
<td>0.9</td>
</tr>
<tr>
<td>West Fraser Timber</td>
<td>2,301</td>
<td>3,010</td>
<td>(297)</td>
<td>(129)</td>
<td>-4.4</td>
<td>-3.7</td>
</tr>
<tr>
<td>Canfor</td>
<td>1,868</td>
<td>2,466</td>
<td>(63)</td>
<td>(326)</td>
<td>-2.0</td>
<td>-6.8</td>
</tr>
<tr>
<td>Tembec</td>
<td>1,573</td>
<td>2,243</td>
<td>(202)</td>
<td>(142)</td>
<td>-18.1</td>
<td>-7.2</td>
</tr>
<tr>
<td>Catalyst</td>
<td>1,059</td>
<td>1,746</td>
<td>4</td>
<td>(208)</td>
<td>2.5</td>
<td>-2.1</td>
</tr>
<tr>
<td>Mercer International</td>
<td>865</td>
<td>1,060</td>
<td>(86)</td>
<td>(107)</td>
<td>-2.8</td>
<td>-3.8</td>
</tr>
<tr>
<td>Norbord</td>
<td>718</td>
<td>943</td>
<td>(58)</td>
<td>(116)</td>
<td>-3.8</td>
<td>-5.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21,631</strong></td>
<td><strong>28,425</strong></td>
<td><strong>(1,900)</strong></td>
<td><strong>(3,887)</strong></td>
<td><strong>-3.0</strong></td>
<td><strong>-4.4</strong></td>
</tr>
</tbody>
</table>

Source: PricewaterhouseCoopers LLP

PwC Top 100 — Results by Country/Region
Financial Performance

The struggle continued for Canadian forest, paper and packaging companies in 2009. Lower sales volumes and prices meant fewer companies made this year’s PwC Top 100. Nine Canadian companies in total made the list in 2009, down from 13 and 11 in 2008 and 2007 respectively. Western Forest Products dropped just below the PwC Top 100 threshold with sales of $512 million down from $769 million in 2008. Interfor and Ainsworth reported sales of $344 million and $252 million respectively.

The nine Canadian companies reported sales of $22 billion in 2009 down from $28 billion reported in 2008. All nine Canadian companies reported reduced sales and collectively accounted for less than 10% of PwC Top 100 sales. Domtar and AbitibiBowater alone reported decreased sales of close to $3.5 billion, representing 50% of the overall sales reduction for the region.

Net losses for Canadian companies decreased by close to $2.0 billion relative to 2008. Two companies, Domtar and Cascades, returned to profitability in 2009 and Domtar and AbitibiBowater reported the largest absolute changes in financial performance. In spite of close to a billion dollar reduction in sales revenue, Domtar registered close to a billion dollar improvement in net income of $310 million for 2009, up from a net loss of $573 million in 2008, mainly due to lower operating costs and the Alternative Fuel Mixture Credit. AbitibiBowater reported a net loss of $1.6 billion, down from a $2.2 billion loss in 2008. Domtar and AbitibiBowater received cash payments totalling close to $0.8 billion in 2009 from the US Alternative Fuel Mixture Credit.

Overall ROCE was negative 3.0% for the region in 2009, compared to negative 4.4% in 2008. Three Canadian companies generated positive ROCE in 2009 compared to only one in 2008. Cascades had the highest ROCE at 4.6% (2008: 0.9%), followed by Domtar at 2.4% (2008: 0.0%) and Catalyst at 2.5% (2008: negative 2.0%). All other Canadian PwC Top 100 companies generated negative ROCE in 2009.
Latin America

Consistent with other regions, GDP growth declined sharply in Latin America in late 2008 and early 2009 due to the global recession, but led by strong domestic consumption the region emerged more quickly from the downturn than advanced economies. Nonetheless, overall growth was down significantly for the year. Brazil experienced a decline in GDP from 5.1% in 2008 to negative 0.2% in 2009. Mexico’s economy, with its close ties to the United States, contracted sharply during the recession, with GDP shrinking 6.5% in 2009, down from growth of 1.5% in 2008.

A difficult start to the year, however, did not deter deal activity. Two of Brazil’s biggest players, Votorantim Celulose e Papel (VCP) and Aracruz Celulose completed a merger valued at close to $8.0 billion to become the world’s largest pulp company, controlling around one-third of the global short fibre market pulp capacity. VCP gained control of Aracruz in January 2009 with the full merger being concluded in August 2009 and the new company became known as Fibria. To help reduce debt, Fibria sold its Guaiba unit which included pulp and paper mill operations and a eucalyptus plantation to CMPC in neighbouring Chile for $1.4 billion.

Table 7: Top Latin American Forest, Paper & Packaging Companies
(US $ millions)

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<td>16,774</td>
<td>16,714</td>
<td>2,203</td>
<td>(75)</td>
<td>5.7</td>
<td>2.4</td>
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</table>

Source: PricewaterhouseCoopers LLP

¹. Note that Fibria is the result of a merger between VCP and Aracruz. Fibria’s year-over-year results are not directly comparable since 2009 reflects the combined performance of both VCP and Aracruz, while 2008 excludes Aracruz and reflects the performance of VCP only.
Emerging Asia

Growth in Asia slowed from 7.0% in 2009 to 5.6% in 2008. China experienced a modest decline in growth to 8.7% in 2009 from 9.6% in 2008, but remained strong relative to other regions. China's robust growth currently plays a pivotal role in both the regional and global economies, and the government is committed to maintaining economic expansion. During the economic crisis, the government in China injected more than half a trillion dollars of stimulus spending into infrastructure and housing to boost the economy, the effects of which are evident in the GDP numbers. Stimulus spending has eased into the new year with concerns over economic overheating.

Indeed, Asia’s relatively healthy results, led by China and India, helped spur the beginnings of a global recovery in the second quarter of 2009. Demand for forest, paper and packaging products took a dip for a while as exports to Western markets fell, but recovered on the back of increased domestic demand. Growth fundamentals in the region led by China’s investments and exports remained strong.

Asia has the greatest demand, but the least amount of readily available fibre of any region. Although plantations in China and elsewhere in Asia have expanded and waste paper recovery has improved, they cannot plug the fibre deficit. These countries led by China continue to import significant quantities of fibre in all formats (logs, sawn timber, chips, pulp and waste paper) from all other regions of the world. In 2009, the region saw relatively modest levels of M&A, however many of the deals reported involved producers based in China or Hong Kong looking to secure long-term sources of fibre.

Financial Performance

US dollar sales for the nine Latin American-based companies on the PwC Top 100 list were comparable to the levels reported in prior years. Aggregate sales of $17 billion, or 5% of total sales of the PwC Top 100 were reported in 2009. However, sales translated from domestic currencies are indicative of the impact of each country’s currency volatility on results. For example, aggregate sales for Brazil increased 32% year-over-year in domestic currency compared to 24% in US dollars. Sales for Mexico reported in Pesos decreased 14% compared to a 5% increase when reported in US dollars. Duratex, with its acquisition of Satipel in 2009 made the PwC Top 100, becoming the largest producer of industrial wood panels in the Southern Hemisphere.

It is important to note that Fibria’s year-over-year results are not directly comparable. Fibria reported sales of $2.8 billion and net income of $0.5 billion for 2009 reflected the consolidation of Aracruz into VCP. For 2008, however, Fibria comprises VCP only. Consequently, the 2008 performance of Aracruz, which ranked 53rd in last year’s PwC Top 100 survey with sales of $2 billion and a net loss of $1.2 billion are not represented in the 2008 comparative aggregate results for the Latin America region in this year’s survey.

Net income amounted to $2.2 billion in 2009, up from a net loss of $75 million in 2008. All nine companies reported positive net income in 2009, in contrast to 2008, where only five out of nine companies showed positive earnings.

Movement of local currencies relative to the US dollar had a favourable impact on ROCE and on the translation of US dollar denominated debt for the majority of Latin American producers in 2009. ROCE increased to 5.7% in 2009, up from 2.4% in 2008, with all nine companies achieving positive ROCE. Grupo Industrial Durango, Fibria, and Suzano generated the largest improvements in ROCE. In the case of Grupo Industrial Durango the Mexican Pesos devaluated on average 18% against the US dollar during the year.
China has continued to shutter old, out-of-date and frequently highly polluting pulp and paper capacity, and whilst large scale new build paper projects were paused due to the global economic crisis and capital flight from international investors, these have now resumed construction. Huge new capacity in fine paper, tissue and board is being introduced — mainly in China but also in adjacent countries — which upon completion will put additional pressure on the supply of virgin and recovered fibre inputs.

Financial Performance

Overall there was little change in financial performance for the Emerging Asia region. US dollar sales for the 11 Asian-based companies remained relatively stable at $14 billion and represented 4% of the PwC Top 100 sales. The six Chinese-based companies reported sales of $8 billion, which represented 60% of total sales for the region. There are still few Chinese companies in the PwC Top 100, despite the size of the domestic market. This reflects a combination of market fragmentation and companies whose financial information is outside of the public domain.

With the exception of the Chinese Renminbi which was stable relative to the US dollar in 2009, volatility in domestic currencies influenced results for companies operating within the Emerging Asia region. Sales for Ballarpur, for example, were unchanged year-over-year, but dropped in US dollar terms due to an average 11% depreciation of the Indian Rupee. Domestic currencies for Thailand, Taiwan and South Korea depreciated on average 4%, 5% and 15% respectively.

Net income for the Asian-based companies amounted to $1.2 billion. As was the case for the Latin American region, all 11 Asian-based companies reported positive earnings with Chinese-based companies generating 80% of the earnings for the region, down from 89% in 2008. ROCE decreased to 6.3% from 6.8% in 2008. Shandong Huatai Paper achieved the highest ROCE at 12.1%, followed by Sino Forest at 10.5%.

Table 8: Top Emerging Asia Forest, Paper & Packaging Companies

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<td>China</td>
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<td>Hansol Paper</td>
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<td>229</td>
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<tr>
<td>Shandong Huatai Paper</td>
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<tr>
<td>Ballarpur Industries</td>
<td>India</td>
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<td>654</td>
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<td>13,609</td>
<td>1,148</td>
<td>1,042</td>
<td>6.3</td>
<td>6.8</td>
</tr>
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</table>

Source: PricewaterhouseCoopers LLP
Other Regions

Our PwC Top 100 includes companies from some regions not addressed in this analysis, notably Australia and South Africa. The two South African companies, Sappi and Nampak, reported sales of $6.4 billion. The sole Australian company, PaperlinX, reported reduced sales of $5.2 billion and a net loss of $633 million, reflective of substantial debt reduction measures undertaken by PaperlinX during the year, including asset write-downs and other losses connected with the sale of Australia Paper to Nippon Paper and the renegotiation of debt covenants.

Table 9: Financial Summary Information by Country/Region
(US $ millions)

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<td>Total – Emerging Asia</td>
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<td>13,609</td>
<td>(2.0)</td>
<td>1,148</td>
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<td>6.8</td>
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Source: PricewaterhouseCoopers LLP
The PricewaterhouseCoopers Global Forest, Paper & Packaging Industry Survey examines the 100 largest forest, paper and packaging products companies in the world — whether state, private, publicly owned, or a division of a larger entity — ranked by sales, provided there is sufficient public disclosure to allow meaningful analysis.

The data reported is drawn from a number of sources including annual reports, websites, press releases and the companies. Information may be unaudited. There are known to be several companies, mainly privately-owned entities, that are of sufficient size to warrant inclusion in the PwC Top 100, but which have been excluded due to no or limited financial information being available. These companies include but are not limited to:

**North America**
Georgia-Pacific (part of Koch Industries), Kruger, Tolko and Menasha

**Europe**
Tetrapak (Sweden), SAICA (Spain), Fritz Egger (Austria), Elopak (Norway), Papierfabrik Palm (Germany), Fedrigoni Group (Italy) and Ilim Pulp (Russia)

**Asia Pacific**
Asia Pulp and Paper (APP) (Indonesia and China), Asia Pacific Resources International (APRIL) (Singapore/Indonesia), Rank Group (New Zealand) and Visy Industries (Australia)

The PwC Top 100 results include only companies whose forest, paper and fibre packaging products business comprise more than 50% of total sales. Companies are grouped based on the location of their head offices. The 2008 comparative corporate data included in this Survey depends upon the data reported in the companies’ 2009 annual reports. PwC takes no responsibility for the correctness of the extrapolated figures. The 2009 Japanese data is for their fiscal year ended March 31, 2009.

Return on Capital Employed (ROCE) is calculated as net income before unusual items, minority interest and interest expense, on an after-tax basis, divided by average total assets less average non-interest bearing current liabilities. Cash flow from operations excludes changes in working capital.

Unusual items have a significant bearing on the net income figure used for the purpose of calculating ROCE. As an example, in some cases, when reported earnings are negative, the effect of adding back unusual items results in a positive adjusted net income, and therefore a positive ROCE. Restructuring charges, discontinued operations, exceptional tax credits, impairment charges, gain on the sale of fixed assets, and accounting changes are among the items commonly treated as unusual items and therefore excluded from the ROCE calculation.

Foreign exchange fluctuations can have a significant impact on the data presented. This Survey has directly adopted the results of companies that report in US dollars; otherwise we have translated income statement items at the 2009 and 2008 average rates for the calendar years (irrespective of year ends within 2009). Balance sheet items have been translated at the rates as of December 31, 2009 and 2008 respectively.
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<th>Currency Type</th>
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Transformation through innovation

The forest and paper sector is addressing the reality of transformation. Many see fallout from the global economic crisis as a catalyst forcing companies to look at the fundamentals of their businesses and accelerating change. Most companies are highly aware of the need to get back to basics and earn acceptable returns as a prerequisite for lasting change. At the same time, many companies are beginning to transform their businesses, especially in the emerging areas such as bioenergy and new markets, including China. Numerous types of innovation around technologies, products, partnerships and business models are helping to shape the transition.

Bruce McIntyre, Canadian Leader of PricewaterhouseCoopers (PwC) Forest, Paper & Packaging practice, welcomed over 400 CEOs, senior executives, customers, suppliers, financial analysts, government representatives and other stakeholders to PwC’s 23rd Annual Global Forest and Paper (FPP) Industry conference in Vancouver, Canada on 11 May 2010. Panel discussions covered the state of the industry, the case for change, sustainability, global market outlook and how some producers have successfully transformed their operations and returned to profitability. New insights, revenue streams and emerging trends were discussed. One of the day’s highlights was the Executive Perspectives panel, where leading industry CEOs shared what was at the top of their business agenda and their plans for the next one to two years.

Economic Indicators and Trends

Looking for the upswing. Douglas Porter opened the conference with a global economic overview describing a modest global recovery, better than expected growth, monetary tightening and government restraint. “Recovery will stick”, says Porter but is cautious about “a shackled US consumer” and levels of sovereign risk particularly in Japan and Europe.

Michael Murphy shared observations on the North American capital and M&A markets. Murphy describes a banking sector that has regained confidence, but remains challenged. He sees the recovery of capital markets as being robust but uneven, and expects M&A activity to rebound going forward.

Industry Outlook

It’s no secret that the forest and paper industry has been facing tough times. Michael Armstrong discussed short-term relief for the Canadian industry in late 2009 and early 2010 from supply shortages and increased prices, but cautioned that the industry faces longer-term challenges to rebuild supply chain components ravaged by weak economic conditions. Fred Bouchard also commenting on Canada added that “the supply side is driving price rather than demand.” “While we have seen signs of relief in 2010, the underlying fundamentals for growth are not there for the forest and paper industry.” Some executives were notably more optimistic. Hank Ketcham described the difficulties faced by the Canadian wood products industry in the last four years, but sees a bright future for the industry. Wood is sustainable, energy efficient, and has a low carbon footprint — these factors should make it the environmental building material of choice. Nonetheless, demand is currently bleak. Ironically, the US housing market is presently under built, but no one is buying. The devastation wrought by the mountain pine beetle has significantly reduced timber supply in Western Canada, however, supply and demand are reasonably in balance. Ketcham anticipates sustainable price increases once the market returns.
The Honourable Pat Bell, Minister of Forests and Range for British Columbia, cited capacity utilisation, growing trees, the Wood First Initiative, and the market in China as being priorities, and described collaboration between First Nations, labour unions, governments, management, and investors as key to the success of these priorities.

In some sectors the situation has already improved. Chip Dillon focussed on the paper industry and highlighted enhanced margins for the US containerboard industry, where growth has come from recycled fibre. Dillon warns that recycling capacity is limited. He believes producers not tied exclusively to recycled fibre may have a potential competitive advantage, should shortages and increases to the global cost curve arise in future.

Another bright spot was described by Kurt Schaefer, who looked at how the explosive demand for paper and paperboard from China is driving fibre demand. China is working on stemming pollution and cleaning up industry, and the paper industry is not viewed as a clean industry. China’s goal is to be self sufficient in paper production. Over the medium-term, this could create further opportunity for North America and Europe to supply recycled raw material inputs.

Transformation

During the Conference, panelists provided a wide range of concrete examples of how their companies are transforming. For Probuild and Longview Fibre, returning to the basics was essential. Paul Dodge explained steps taken by Probuild to improve the cost structure through consolidation, cutting overhead and expenses, right sizing of markets, and increasing collaboration with suppliers. Hugh Sutcliffe recounted the rebirth of the Longview Fibre Paper and Packaging operation both physically and financially. Historically plagued by weak performance, key to the transformation was real and meaningful change from within people and instilling a performance-based results driven culture.

People — not only employees and customers but also a wide range of stake-holders — were at the core of another presenter’s remarks as well. Chaovalit Ekabut described the need for what he termed a “People Centric” dynamic in order to achieve sustainable development. He related how SCG Paper, based in Thailand, looks beyond the traditional paper business and challenges of competing with capacity and scale from China and India and concentrates on investment in R&D to develop new products and better serve customers.

Another transformation strategy involves shifting priorities in order to prioritise areas which show more current and future growth potential. Gunnar Olofsson described how Sveaskog is transforming from being a forest industry company to focusing more on forest management and forest value opportunities. He asserts that customers are making more and more demands for sustainable forest management, and while traditional sawn timber and pulpwood remain as mainstream products, bioenergy and carbon capture will provide opportunities for new value in the future. Dan Fulton agrees. He highlighted the need to look to new and alternative revenue sources from timberland, not only in the underlying value of the land itself, but in protecting land, focusing on energy policy, benefitting from long term potential in carbon markets and deriving value from water, wind, mineral rights, sand and gravel.

Carbon markets are one of the newest of these areas, and Scott MacDonald discussed how FPP companies can be proactive and position themselves to take advantage of an emerging carbon market in Canada when a cap and trade system comes into play. Forest offset projects represent a great source of carbon sequestration and Canadian forests have caught the interest of the international community. Opportunity lies in finding ways to demonstrate improvement in forest management in a way that sequesters more carbon and then finding markets internationally to sell the value of that increased sequestration.
Mercer is one company that has already derived revenues from selling carbon credits (into the EU Emission Trading System, where the company has operations), and is also pursuing a strategy of increasing production of biomass electricity. Brian Merwin discussed the positive correlation between pulp and energy production; in Mercer’s case, the company is generating incremental opportunities by using what is already being consumed more efficiently. Merwin describes how what were once secondary byproducts have become “Co-Products” whose revenue streams have the potential to smooth out the cyclical nature of the business.

Merwin also describes the beginning of a fundamental paradigm shift. New business models will add “Co-Products” to existing core products. The resulting greater revenues will offset new costs, such as carbon costs and the energy premium on wood. Companies which fail to invest in technologies to enable these new revenue streams will face significant risks. As climate-related costs increase, companies relying solely on traditional revenue streams will face further pressure on already slim margins. Merwin referred to his company’s Celgar Green Energy Project as an example of transformative change, where significant investments in improved technology are paving the way for long-term revenue enhancement.

In order to take advantage of these types of opportunities, companies will need to develop new partnerships. Cam Matheson described large-scale and community-based bioenergy initiative projects undertaken by BC Hydro, the province’s largest electricity provider, as well as efforts to work with pulp and paper producers to find innovative ways to acquire cost effective energy.
What Does the Future Hold?

There are clear challenges. Bjorn Stigson spoke of world population, poverty and a world that will be resource and carbon constrained. He remains optimistic, though. Stigson described the times as being transformational with a great future. The forest and paper industry will play a critical future role by offering renewable solutions and services and through technological innovation. He stressed the importance of better functioning cooperation between governments and business.

While government support will be important, executives will also need to take responsibility for their companies’ destinies. Avrim Lazar cites increasing productivity, diversification of products and markets, extracting more value from every tree harvested, and better ways of translating environmental performance to economic advantage as four ways the industry can drive transformation, regardless of whether “winds are fair or foul”. Avrim concluded with, "It ain’t the storm; it’s how smart you sail."

**Panelists:**

- **Michael Armstrong**  
  Director  
  PricewaterhouseCoopers, LLP  
  Vancouver, Canada

- **Chip Dillon**  
  Managing Director, N.A. Paper & Packaging  
  Credit Suisse Securities  
  New York, USA

- **Frédéric Bouchard**  
  Managing Director  
  PricewaterhouseCoopers LLP  
  Montréal, Canada

- **Paul Dodge**  
  Senior Vice President  
  Supply Chain  
  ProBuild  
  Denver, USA

- **Chaovarit Ekabut**  
  President  
  SCG Paper  
  Bangkok, Thailand

- **Dan Fulton**  
  President and CEO  
  Weyerhaeuser  
  Seattle, USA

- **Hank Ketcham**  
  Chairman, President and CEO  
  West Fraser Timber Co. Ltd.  
  Vancouver, Canada

- **Avrim Lazar**  
  President and CEO  
  Forest Products Association of Canada (FPAC)  
  Ottawa, Canada

- **D. Scott MacDonald**  
  CEO  
  Pacific Carbon Trust  
  Victoria, Canada

- **Cam Matheson**  
  Acting Executive Vice-President  
  Customer Care & Conservation, BC Hydro  
  Vancouver, Canada

- **Brian Merwin**  
  Vice President  
  Strategic Initiatives, Mercer International  
  Vancouver, Canada

- **Michael Murphy**  
  Executive Director  
  Investment Banking  
  JP Morgan Securities Inc.  
  Chicago, Illinois USA

- **Gunnar Olofsson**  
  Executive Officer  
  Sveaskog  
  Stockholm, Sweden

- **Douglas Porter**  
  Deputy Chief Economist & Managing Director  
  BMO Capital Markets  
  Toronto, Canada

- **Kurt Schaefer**  
  Vice President  
  Fiber RISI  
  Boston, USA

- **Bjorn Stigson**  
  President  
  World Business Council for Sustainable Development  
  Geneva, Switzerland

- **Hugh Sutcliffe**  
  Managing Partner  
  Brookfield Asset Management  
  Vancouver, Canada

**Luncheon speaker:**

- **Honourable Pat Bell**  
  Minister of Forests and Range, British Columbia Ministry of Forests  
  Victoria, Canada
Global Reviews

Forest, Paper and Packaging Deals —
Global deals activity in the forest, paper &
packaging industry (2009)

Forest, Paper and Packaging Deals reviews the deal activity in the FPP industries. We examine the rationale behind deal trends and key individual deals. This year we include discussion of restructuring activity in North America in order to address the impact of financial distress on that region’s deal market, and look at the reasons behind the high level of deals which took place in Latin America. We highlight some critical issues for companies engaging in deal activity within the sector, including timberland investments, biopathways, and sustainable packaging issues.

CEO Perspectives: Viewpoints of CEOs in the forest, paper & packaging industry worldwide (2010 edition)

Our third edition of CEO Perspectives summarises the thoughts of 33 CEOs, or equivalent, from leading forest, paper & non-paper packaging sectors on the state of the industry, the key issues it faces and its future direction. This latest edition grappled with major changes in the world in which the FPP industry operates. It has also highlighted the split between mature and emerging markets. So how will the industry reshape itself to meet future challenges? Our study takes a look at the types of transformation needed in the industry, and elaborates on four key trends — getting the business basics right, improving cost structures, deriving the most value from every tree and shaping the industry’s future.

Regional Reviews

Putting IFRS in Motion — The impact of International Financial Reporting Standards (IFRS) on the Canadian forest, paper and packaging sector (2009)

This report draws on PwC’s experience working with more than 12,000 companies during their IFRS transition and details valuable lessons applicable to Canada’s forest, paper and packaging sector. In particular the report discusses some of the differences between Canadian GAAP and IFRS and how we can manage your transition to the new reporting language.

Risks & Rewards — Forest, paper & packaging in South America (2007)

This publication addresses the state of the industry in South America — a series of interesting growth markets for forest, paper and packaging products — and reflects on key considerations for potential investors. With the lowest wood costs of any leading producer region, South America looks set to become a dominant producer of market pulp globally. The publication includes a major focus on Brazil as well as sections on other key South American markets — Argentina, Chile, Colombia & Uruguay.

Technical Issues

Forest Industry: Application Review of IAS 41,
Agriculture: The Fair Value of Standing Timber (2009)

This study reviews how fair value is being applied by forest owning companies using IFRS. It aims to provide insight into the key judgments that are made by preparers from around the world and highlights some of the difficulties as well as similarities and differences.
Related Materials:

Outlook for Newspaper Publishing in the Digital Age (2009)
This study examines the outlook for newspaper publishers as they deal with long-term structural challenges related to declining circulation and ad sales, adapt to the digital revolution, and cope with the continuing fallout of the global economic slowdown. Research by PwC’s Entertainment & Media Industry practice, carried out in cooperation with the World Association of Newspapers (WAN), focuses on two key issues: the change of consumer behaviour with respect to their consumption of news content, and the response of newspaper publishers, advertisers, advertising agencies and media buyers to these changes.

Sustainable packaging: threat or opportunity? (2010)
Under constant pressure from government, the media, customers and consumers, the packaging industry is increasingly being forced to consider how its products can be made more sustainable. Faced with pressing issues of over capacity, low prices and high raw material costs, should ‘sustainable packaging’ be a top concern for packaging senior executives? Based on in-depth interviews with senior executives from leading packaging companies in Europe, we outline in this report the key challenges and opportunities the issue of ‘sustainable packaging’ raises for leaders in the industry.
PricewaterhouseCoopers Global Forest, Paper & Packaging practice comprises a network of industry professionals located in over 35 countries around the world.

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Global Forest, Paper & Packaging Industry Survey

2010 Edition – Survey of 2009 Results